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Environmental Noise Control Study

Proposed Development
1050 Canadian Shield Avenue
Ottawa, Ontario

Prepared For

Canadian Rental Development Services

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January 31, 2021

Report: PG5782-1 Revision 1

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1.0 Introduction

Paterson Group (Paterson) was commissioned by Canadian Rental Development Services to conduct an environmental noise control study for the proposed residential building to be located at 1050 Canadian Shield Avenue, in the City of Ottawa.

The objectives of the current study are to:

- ❏ Determine the primary noise sources impacting the site and compare the projected sound levels to guidelines set out by the Ministry of Environment and Climate Change (MOECC) and the City of Ottawa.

- ❏ Review the projected noise levels and offer recommendations regarding warning classes, construction materials or alternative sound barriers.

The following report has been prepared specifically and solely for the aforementioned project which is described herein. It contains our findings and includes acoustical recommendations pertaining to the design and construction of the subject development as they are understood at the time of writing this report.

This study has been conducted according to City of Ottawa document - Engineering Noise Control Guidelines (ENCG), dated January 2016, and the Ontario Ministry of the Environment Guideline NPC-300.

2.0 Background

It is understood that the proposed project will consist of a three (3) to six (6) storey residential building with one (1) basement level at the south side of the building. Associated at-grade walkways, parking areas and landscaped areas are anticipated. Terraces are anticipated at the balconies of the building. An at-grade courtyard and at-grade common terraces are also anticipated at the centre of the site area, surrounded by the three (3) to six (6) storey residential building in all directions effectively shielding the interior courtyard from the exterior noise sources.

3.0 Methodology and Noise Assessment Criteria

The City of Ottawa outlines three (3) sources of environmental noise that must be analyzed separately:

- Surface Transportation Noise
- Stationary Noise
  - new noise-sensitive development applications (noise receptors) in proximity to existing or approved stationary sources of noise, and
  - new stationary sources of noise (noise generating) in proximity to existing or approved noise-sensitive developments
- Aircraft noise

Surface Transportation Noise

The City of Ottawa's Official Plan, in addition to the ENCG, dictate that the influence area must contain any of following conditions to classify as a surface transportation noise source for a subject site:

- Within 100 m of the right-of-way of an existing or proposed arterial, collector or major collector road; a light rail transit corridor; bus rapid transit, or transit priority corridor
- Within 250 m of the right-of-way for an existing or proposed highway or secondary rail line
- Within 300 m from the right of way of a proposed or existing rail corridor or a secondary main railway line
- Within 500 m of an existing 400 series provincial highway, freeway or principle main railway line.

The NPC-300 outlines the limitations of the stationary and environmental noise levels in relation to the location of the receptors. These can be found in the following tables:

Table 1 - Sound Level Limits for Outdoor Living Areas

Time Period	Required $L_{eq(16)}$ (dBA)
16-hour, 7:00-23:00	55

- Standards taken from Table 2.2a; Sound Level Limit for Outdoor Living Areas - Road and Rail

Table 2 - Sound Level Limits for Indoor Living Area			
Type of Space	**Time Period**	**Required L_{eq} (dBA)**	
		Road	**Rail**
Living/Dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc	7:00-23:00	45	40
Theaters, place of worship, libraries, individual or semi-private offices, conference rooms, reading rooms	23:00-7:00	45	40
Sleeping quarters	7:00-23:00	45	40
	23:00-7:00	40	35
❑ Standards taken from Table 2.2b; Sound Level Limit for Indoor Living Areas - Road and Rail			

It is noted in ENCG that the limits outlined in Table 2 are for the sound levels on the interior of the glass pane. The ENCG further goes on to state that the limit for the exterior of the pane of glass will be 55 dBA.

If the sound level limits are exceeded at the window panes for the indoor living areas, the following Warning Clauses may be referenced:

Table 3 - Warning Clauses for Sound Level Exceedances	
Warning Clause	**Description**
Warning Clause Type A	"Purchasers/tenants are advised that sound levels due to increasing road traffic (rail traffic) (air traffic) may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."
Warning Clause Type B	"Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."
Warning Clause Type C	"This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."
Warning Clause Type D	"This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."
❑ Clauses taken from section C8 Warning Clauses; Environmental Noise Guidelines - NPC-300	

Stationary Noise

Stationary noise sources include sources or facilities that are fixed or mobile and can cause a combination of sound and vibration levels emitted beyond the property line. These sources may include commercial air conditioner units, generators and fans. It is anticipated that roof top units may be required on this site, and a stationary noise analysis should be completed once the mechanical equipment has been finalized.

The subject site is not in proximity to existing or approved stationary sources of noise. Therefore, a stationary noise analysis will not be required.

Aircraft/Airport Noise

The subject site is not located within the Airport Vicinity Development Zone. Therefore this project will not require an aircraft/airport noise analysis. No warning clauses regarding aircraft or airport noise will be required.

4.0 Analysis

Surface Transportation Noise

The subject building is bordered to the north by Campeau Drive followed by residential dwellings, to the east by an institutional building followed by Maritime Way, to the west by Great Lakes Avenue followed by commercial buildings, and to the south by Canadian Shield Avenue followed by commercial buildings. Campeau Drive, Great Lakes Avenue, and Canadian Shield Avenue are identified within the 100 m radius of the proposed building.

Based on the City of Ottawa Official Plan, Schedule F, Campeau Drive is considered a 2 lane urban arterial road (2-UAU). Other roads within the 100 m radius of the development are not classified as either arterial, collector or major collector roads and therefore are not included in this study. Additionally, the 3 lane Highway 417 westbound and the 3 lane Highway 417 eastbound are within the 500 m radius from the proposed building.

All noise sources are presented in Drawing PG5782-3 - Site Geometry located in Appendix 1.

The noise levels from road traffic are provided by the City of Ottawa, taking into consideration the right-of-way width and the implied roadway class. It is understood that these values represent the maximum allowable capacity of the proposed roadways. The parameters to be used for sound level predictions can be found below.

Table 4 - Traffic and Road Parameters

Road	Implied Roadway	AADT (Veh/day)	Posted Speed (km/h)	Day/Night Split %	Medium Truck %	Heavy Truck %
Highway 417 Westbound	3- Queensway	54,999	100	92/8	7	5
Highway 417 Eastbound	3- Queensway	54,999	100	92/8	7	5
Campeau Drive	4-UAD	35,000	60	92/8	7	5

❑ Data obtained from the City of Ottawa document ENCG or calculated from OC Transpo online schedules

A total seven (7) levels of reception points were selected for the analysis at the building units and the balcony terraces. The following elevations were selected from the heights provided on the survey plan for the subject building.

Table 5 - Elevation of Reception Points

Floor Number	Elevation at Centre of Window (m)	Floor Use	Daytime/Nighttime Analysis
Ground Floor	1.5	Living Area/Bedroom	daytime/nighttime
Third Floor	7.5	Living Area/Bedroom	daytime/nighttime
Sixth Floor	16.5	Living Area/Bedroom	daytime/nighttime
Balcony - 3rd Floor Terrace	10.5	--	Outdoor Living Area
Balcony - 4th Floor Terrace	13.5	--	Outdoor Living Area
Balcony - 5th Floor Terrace	16.5	--	Outdoor Living Area
Balcony - 6th Floor Terrace	19.5	--	Outdoor Living Area

For this analysis, reception points were taken at the centre of each floor, at the ground floor and top floor. The top floor is anticipated to be the 3rd floor at the north side and the 6th floor at the south side of the building. Two receptor points were taken at the east and west elevations, and one receptor point was taken at the north and south elevations of the proposed building.

Outdoor living areas, such as balcony terraces, are anticipated at the proposed building. A total of seven (7) receptor points were selected in the centre of the 3rd floor, 4th floor, 5th floor and 6th floor terraces, at heights ranging from 10.5 m to 19.5 m. It should be noted that only terraces with widths greater than 4.0 m were analyzed as per City of Ottawa standards.

An at-grade common courtyard and at-grade terraces are also anticipated at the centre of the building area. Due to the surrounding exterior walls of the proposed building, there is no direct line of sight to surface transportation noise sources. Therefore any noise levels due to the surface transportation surrounding the subject site will be minimal. Reception points are detailed on Drawing PG5782-2 - Receptor Locations presented in Appendix 1.

All horizontal distances have been measured from the reception point to the edge of the right-of-way. The highway was analyzed where it intersected the 500 m buffer zone, the roadways were analyzed where they intersected the 100 m buffer zone, which is reflected in the local angles described in Paterson Drawings PG5782-3A to 3M - Site Geometry in Appendix 1.

Table 7 - Summary of Reception Points and Geometry, located in Appendix 1, provides a summary of the points of reception and their geometry with respect to the noise sources. The analysis is completed so that no effects of sound reflection off of the building facade are considered, as stipulated by the ENCG.

The subject site is gently sloping downward to south and at grade with the neighbouring roads within 500 m radius.

The analysis was completed using STAMSON version 5.04, a computer program which uses the road and rail traffic noise prediction methods using ORNAMENT (Ontario Road Noise Analysis Method for Environment and Transportation) and STEAM (Sound from Trains Environment Analysis Method), publications from the Ontario Ministry of Environment and Energy.

5.0 Results

Surface Transportation

The primary descriptors are the 16-hour daytime and the 8-hour night time equivalent sound levels, $L_{eq(16)}$ and the $L_{eq(8)}$ for City roads.

The proposed traffic noise levels were analyzed at all reception points. The results of the STAMSON software can be located in Appendix 2, and the summary of the results can be noted in Table 6 below.

Table 6 - Proposed Noise Levels

Reception Point	Description	OLA (dBA)	Daytime at Facade $L_{EQ(16)}$ (dBA)	Nighttime at Facade $L_{eq(8)}$ (dBA)
REC 1-1	Eastern Elevation, 1st Floor	--	62.86	55.27
REC 1-3	Eastern Elevation, 3rd Floor	--	64.30	56.71
REC 2-1	Eastern Elevation, 1st Floor	--	56.59	49.00
REC 2-6	Eastern Elevation, 6th Floor	--	61.57	53.98
REC 3-1	Southern Elevation, 1st Floor	--	53.98	46.38
REC 3-6	Southern Elevation, 6th Floor	--	60.53	52.94
REC 4-1	Western Elevation, 1st Floor	--	55.62	48.02
REC 4-6	Western Elevation, 6th Floor	--	60.61	53.01
REC 5-1	Western Elevation, 1st Floor	--	61.95	54.36
REC 5-3	Western Elevation, 3rd Floor	--	63.57	55.97
REC 6-1	Northern Elevation, 1st Floor	--	67.09	59.49
REC 6-3	Northern Elevation, 3rd Floor	--	68.30	60.71
REC 7	Balcony Terrace - 4th Common Terrace	59.93	--	--
REC 8	Balcony Terrace - 3rd Terrace (North)	59.99	--	--
REC 9	Balcony Terrace - 6th Terrace (West)	59.56	--	--
REC 10	Balcony Terrace - 5th Terrace (West)	59.52	--	--
REC 11	Balcony Terrace - 4th Terrace (West)	59.54	--	--
REC 12	Balcony Terrace - 5th Terrace (East)	59.56	--	--

Table 6 - Proposed Noise Levels				
Reception Point	**Description**	**OLA (dBA)**	**Daytime at Facade $L_{EQ(16)}$ (dBA)**	**Nighttime at Facade $L_{eq(8)}$ (dBA)**
REC 13	Balcony Terrace - 4th Terrace (East)	n/a - Terrace to narrow to be an OLA		

6.0 Discussion and Recommendations

6.1 Outdoor Living Areas

Terraces are anticipated at the balconies of the proposed building. One (1) receptor point was selected at 3rd floor terrace (REC 8), two (2) receptor points were selected at 4th floor terrace (REC 7 and REC 11), two (2) receptor points were selected at 5th floor terrace (REC 10 and REC 12), and one (1) receptor point was selected at 6th floor terrace (REC 9) for analysis. It should be noted that an outdoor living area located on the 4th floor terrace on the eastern side of the proposed building was initially identified for analysis. However, upon review this terrace is too narrow to be considered an outdoor living area and therefore is not included in this analysis.

All assessments of the terraces were completed using a 1 m high solid (glass) railing providing a nosie barrier to protect the outdoor living areas from the noise from Campeau Drive (i.e the noise barrier is located on the northern portion of the outdoor living areas only). In all circumstances the noise levels of the identified terraces were less than 60 dBA when noise mitigation measures were utilized. However, noting that primary mitigation measures, as outlined in Table 2.3a, was utilized, these exceedances are considered acceptable provided that a Warning Clause Type A is noted on all deeds of sale.

6.2 Indoor Living Areas and Ventilation

The results of the STAMSON modeling indicates that the daytime $L_{eq(16)}$ ranges between 53.98 dBA and 68.30 dBA. The ENCG states that the limits for the exterior of the pane of glass is 55 dBA. This value was exceeded at all elevations, and therefore, units should be designed with the provision for a central air conditioning unit. Additionally, warning clause Type D, as outlined in Table 3, is also recommended for all units. It is understood that the exterior cladding will consist of pre-cast concrete. The proposed daytime $L_{eq(16)}$ of the northern elevation exceeds 65 dBA and therefore will require a review of the exterior building materials to determine that there is adequate soundproofing on the northern elevation.

Proposed Construction Specifications

It is understood that typical window and wall details are proposed for the residential buildings. The effectiveness of the noise insulation can be expressed as the Acoustical Insulation Factor (AIF), calculated as follows:

$AIF = L_{eq(16)(Exterior)} - Leq_{(16)(Interior)} + 10\log_{10}(N) + 2$ dBA

Where:

Leq(16)(Exterior) = Calculated value at the window pane
Leq(16)(Interior) = 45 dBA
N = number of components in the room

No floor plans or detailed design drawings were provided for this portion of the review. A conservative approach is to assume that there are 2 components per room. Therefore, the AIF would need to be at least 28.3 dBA.

A conversion from AIF to a Standard Transmission Class (STC) rating will require the knowledge of room dimensions in addition to the wall and window dimensions. However, a conservative approach would be to increase the AIF factor by 3. Therefore, provided the building materials of either the windows and/or exterior walls have an STC rating of 31.3 or higher, this would be a sufficient noise attenuation device.

A review of industry standards for construction material indicates that, as long as the exterior cladding of the northern elevations consist of concrete panels and that all windows consist of double pane glass, these materials have an STC rating of greater than 31.3 and are considered acceptable. If alternative materials are to be utilized on the northern elevation, then a review will need to be completed once design details are finalized.

7.0 Summary of Findings

The subject site is located at 1050 Canadian Shield Avenue, in the City of Ottawa. It is understood that the proposed development will consist of a 3 to 6-storey residential building. The associated analysis identified three surface transportation noise sources: Highway 417 West, Highway 417 East, and Campeau Drive

Several tiered balcony terraces are anticipated at the building. Only terraces with widths greater than 4.0 m were selected for analysis. The proposed $L_{eq(16)}$ at the balcony terraces were below 60 dBA provided the noise mitigation measure of a 1 m high solid railing will be installed along the northern edge of each identified outdoor living area. However, even with this primary mitigation measures, the noise levels will be above the required 55 dBA. However, as outlined in Table 2.3a, reasonable noise mitigation measures have been utilized to reduce the noise levels, and therefore these exceedances are considered acceptable provided that a Warning Clause Type A is noted on all deeds of sale.

Several reception points were selected for the analysis, consisting of pane of glass reception points on both the first and top level. The top floor is anticipated to be 3rd floor at the north side and 6th floor at the south side of the building. The eastern, southern, western and northern elevations of the proposed building exceeded the 55 dBA guideline specified by the ENCG. Therefore, a warning clause Type D will be required for this dwelling in addition to the installation of a central air conditioning unit.

The following warning clauses are to be included on all Offers of Purchase and Sale and/or lease agreements:

> "This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."
>
> "Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."

8.0 Statement of Limitations

The recommendations made in this report are in accordance with our present understanding of the project. Our recommendations should be reviewed when the project drawings and specifications are complete.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Canadian Rental Development Services or his agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

Paterson Group Inc.

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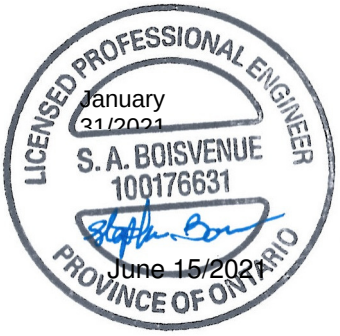

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APPENDIX 1

TABLE 7 - SUMMARY OF RECEPTION POINTS AND GEOMETRY

DRAWING PG5782-1 - SITE PLAN

DRAWING PG5782-2 - RECEPTOR LOCATION PLAN

DRAWING PG5782-3 - SITE GEOMETRY

DRAWING PG5782-3A - SITE GEOMETRY (REC 1-1 and REC 1-3)

DRAWING PG5782-3B - SITE GEOMETRY (REC 2-1 and REC 2-6)

DRAWING PG5782-3C - SITE GEOMETRY (REC 3-1 and REC 3-6)

DRAWING PG5782-3D - SITE GEOMETRY (REC 4-1 and REC 4-6)

DRAWING PG5782-3E - SITE GEOMETRY (REC 5-1 and REC 5-3)

DRAWING PG5782-3F - SITE GEOMETRY (REC 6-1 and REC 6-3)

DRAWING PG5782-3G - SITE GEOMETRY (REC 7)

DRAWING PG5782-3H - SITE GEOMETRY (REC 8)

DRAWING PG5782-3I - SITE GEOMETRY (REC 9)

DRAWING PG5782-3J - SITE GEOMETRY (REC 10)

DRAWING PG5782-3K - SITE GEOMETRY (REC 11)

DRAWING PG5782-3L - SITE GEOMETRY (REC 12)

Table 7 - Summary of Reception Points and Geometry
1050 Canadian Shield Avenue

Point of Reception	Location	Leq Day (dBA)	Campeau Drive								Highway 417 Eastbound							
			Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)	Barrier Height (m)	Barrier Distance (m)	Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)	Barrier Height (m)	Barrier Distance (m)
REC 1-1	Eastern Elevation, 1st Floor	62.86	35	1.5	35	0, 71	n/a	n/a	n/a	n/a	410	1.5	410	-59, 0	3	60	n/a	n/a
REC 1-3	Eastern Elevation, 3rd Floor	64.30	35	10.5	36.5	0, 71	n/a	n/a	n/a	n/a	410	10.5	410.1	-59, 0	3	60	n/a	n/a
REC 2-1	Eastern Elevation, 1st Floor	56.59	90	1.5	90	0, 50	n/a	n/a	n/a	n/a	380	1.5	380	-64, 0	2	40	n/a	n/a
REC 2-6	Eastern Elevation, 6th Floor	61.57	90	16.5	91.5	0, 50	n/a	n/a	n/a	n/a	380	16.5	380.4	-64, 0	2	40	n/a	n/a
REC 3-1	Southern Elevation, 1st Floor	53.98	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	380	1.5	380	-68, 28	2	40	n/a	n/a
REC 3-6	Southern Elevation, 6th Floor	60.53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	380	16.5	380.4	-68, 28	2	40	n/a	n/a
REC 4-1	Western Elevation, 1st Floor	55.62	95	1.5	95	-43, 0	n/a	n/a	n/a	n/a	475	1.5	475	0, 32	1	20	n/a	n/a
REC 4-6	Western Elevation, 6th Floor	60.61	95	16.5	96.4	-43, 0	n/a	n/a	n/a	n/a	475	16.5	475.3	0, 32	1	20	n/a	n/a
REC 5-1	Western Elevation, 1st Floor	61.98	40	1.5	40	-72, 0	n/a	n/a	n/a	n/a	495	1.5	495	0, 18	1	20	n/a	n/a
REC 5-3	Western Elevation, 3rd Floor	63.57	40	10.5	41.4	-72, 0	n/a	n/a	n/a	n/a	495	10.5	495.1	0, 18	1	20	n/a	n/a
REC 6-1	Northern Elevation, 1st Floor	67.09	30	1.5	30	-81, 79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 6-3	Northern Elevation, 3rd Floor	68.30	30	10.5	31.8	-81, 79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 7	Rooftop Terrace - 4th Common Terrace	59.93	44	10.5	45.2	-76, 74	n/a	n/a	9	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 8	Rooftop Terrace - 3rd Terrace (North)	59.99	35	7.5	35.79	-30, 30	n/a	n/a	7	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 9	Rooftop Terrace - 6th Terrace (West)	59.56	65	16.5	67.06	-57, 79	n/a	n/a	9	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 10	Rooftop Terrace - 5th Terrace (West)	59.52	60	13.5	61.5	-59, 81	n/a	n/a	13	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 11	Rooftop Terrace - 4th Terrace (West)	59.54	50	10.5	51.09	-61, 83	n/a	n/a	9	20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 12	Rooftop Terrace - 5th Terrace (East)	59.56	60	13.5	61.5	-77, 65	n/a	n/a	9	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 13	Rooftop Terrace - 4th Terrace (East)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 7 - Summary of Reception Points and Geometry
1050 Canadian Shield Avenue

Point of Reception	Location	Leq Day (dBA)	Highway 417 Westbound							
			Horizontal (m)	Vertical (m)	Total (m)	Local Angle (degree)	Number of Rows of Houses	Density (%)	Barrier Height (m)	Barrier Distance (m)
REC 1-1	Eastern Elevation, 1st Floor	62.86	380	1.5	380	-64, 0	3	60	n/a	n/a
REC 1-3	Eastern Elevation, 3rd Floor	64.30	380	10.5	380.2	-64, 0	3	60	n/a	n/a
REC 2-1	Eastern Elevation, 1st Floor	56.59	345	1.5	345	-70, 0	2	40	n/a	n/a
REC 2-6	Eastern Elevation, 6th Floor	61.57	345	16.5	345.4	-70, 0	2	40	n/a	n/a
REC 3-1	Southern Elevation, 1st Floor	53.98	330	1.5	330	-73, 34	2	40	n/a	n/a
REC 3-6	Southern Elevation, 6th Floor	60.53	330	16.5	330.4	-73, 34	2	40	n/a	n/a
REC 4-1	Western Elevation, 1st Floor	55.62	410	1.5	410	0, 39	1	20	n/a	n/a
REC 4-6	Western Elevation, 6th Floor	60.61	410	16.5	410.3	0, 39	1	20	n/a	n/a
REC 5-1	Western Elevation, 1st Floor	61.98	480	1.5	480	0, 24	1	20	n/a	n/a
REC 5-3	Western Elevation, 3rd Floor	63.57	480	10.5	480.1	0, 24	1	20	n/a	n/a
REC 6-1	Northern Elevation, 1st Floor	67.09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 6-3	Northern Elevation, 3rd Floor	68.30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 7	Rooftop Terrace - 4th Common Terrace	59.93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 8	Rooftop Terrace - 3rd Terrace (North)	59.99	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 9	Rooftop Terrace - 6th Terrace (West)	59.56	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 10	Rooftop Terrace - 5th Terrace (West)	59.52	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 11	Rooftop Terrace - 4th Terrace (West)	59.54	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 12	Rooftop Terrace - 5th Terrace (East)	59.56	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
REC 13	Rooftop Terrace - 4th Terrace (East)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

VACANT

TERRACE
3RD FLOOR

ELEVATOR
SHAFT

COMMON TERRACE
4TH FLOOR

TERRACE 4TH FLOOR

TERRACE 4TH FLOOR

TERRACE
4TH FLOOR

TERRACE
4TH FLOOR

TERRACE
5TH FLOOR

TERRACE
5TH FLOOR

TERRACE
4TH FLOOR

TERRACE
3RD FLOOR

TERRACE
5TH FLOOR

TERRACE
6TH FLOOR

1050 CANADIAN SHIELD AVENUE
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING

TERRACE
6TH FLOOR

COMMON
TERRACE

COURTYARD

TERRACE
2ND FLOOR

COMMON
TERRACE

ELEVATOR
SHAFT

TERRACE
5TH FLOOR

TERRACE
6TH FLOOR

ELEVATOR
SHAFT

TERRACE
6TH FLOOR

TERRACE 6TH FLOOR

900 GREAT LAKES AVENUE
HOMEWOOD SUITES BY HILTON OTTAWA

GREAT LAKES AVENUE

3501 CAMPEAU DRIVE
RED OAK RETIREMENT HOMES

CANADIAN SHIELD AVENUE

SCALE: 1:500

0 5 10 15 20 25 30m

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PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:500	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-1
Approved by: DJG	Revision No.:

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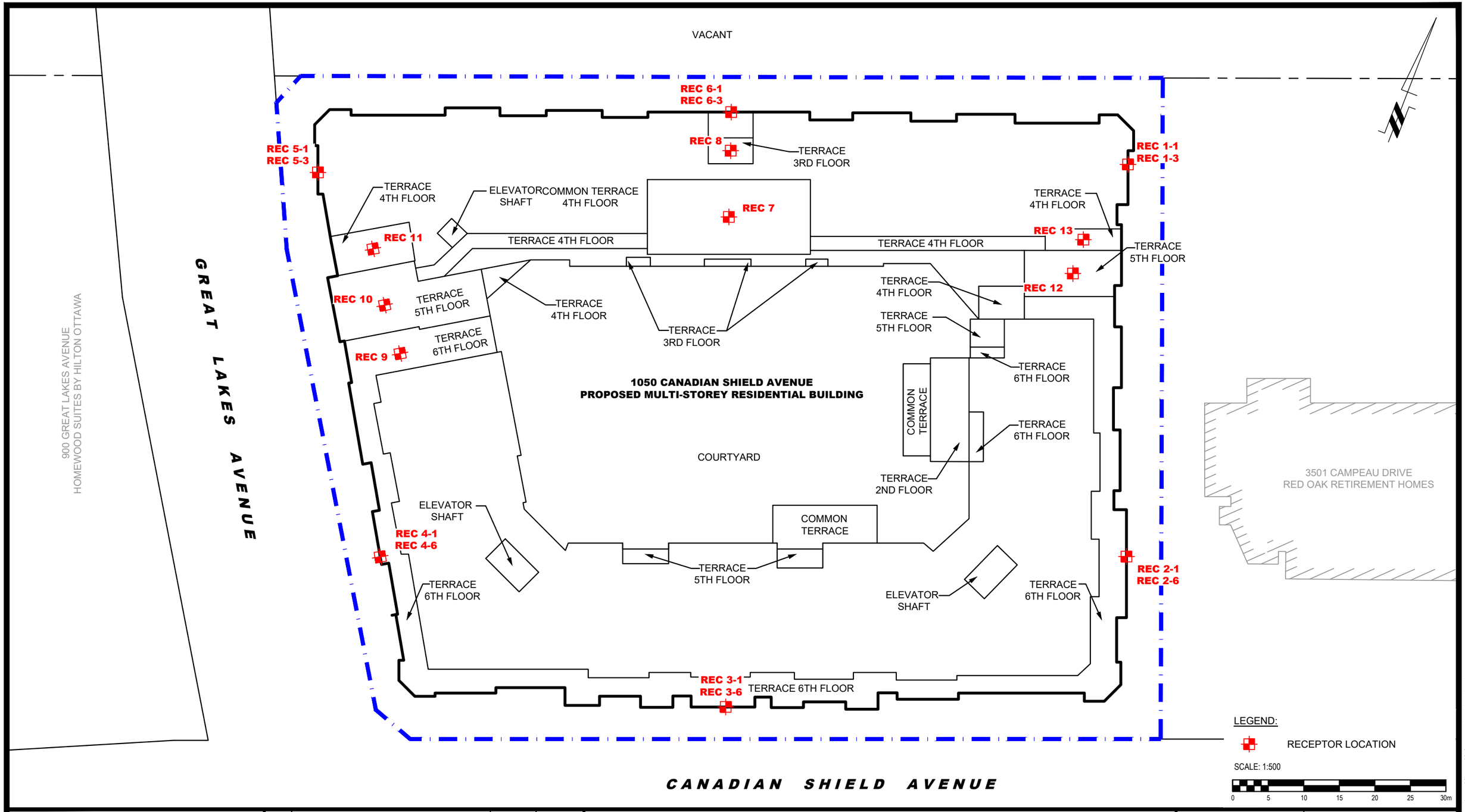

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PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:
RECEPTOR LOCATION PLAN

Scale: 1:500	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-2
Approved by: DJG	Revision No.:

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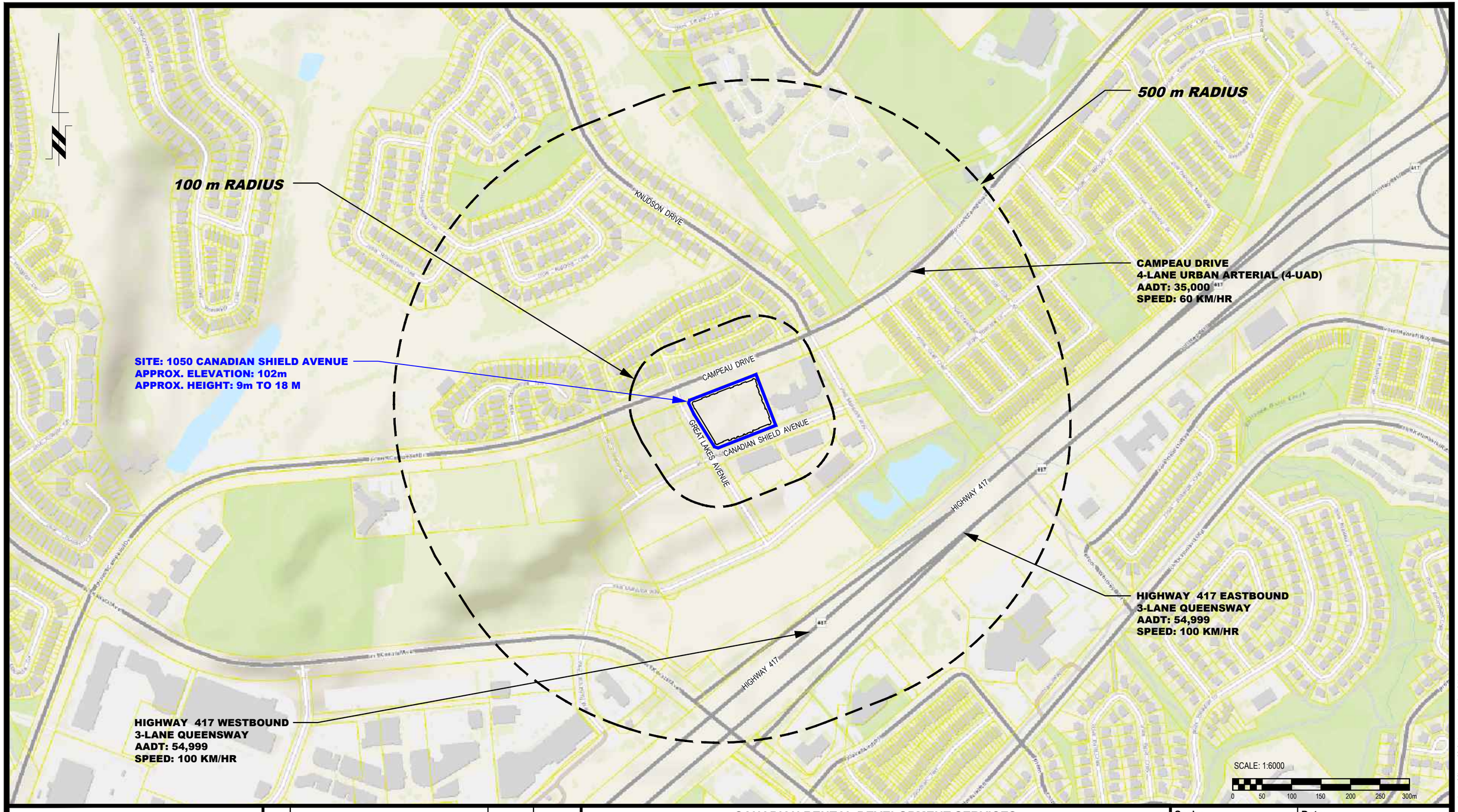

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NOISE ATTENUATION STUDY
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3
Approved by: DJG	Revision No.: 1

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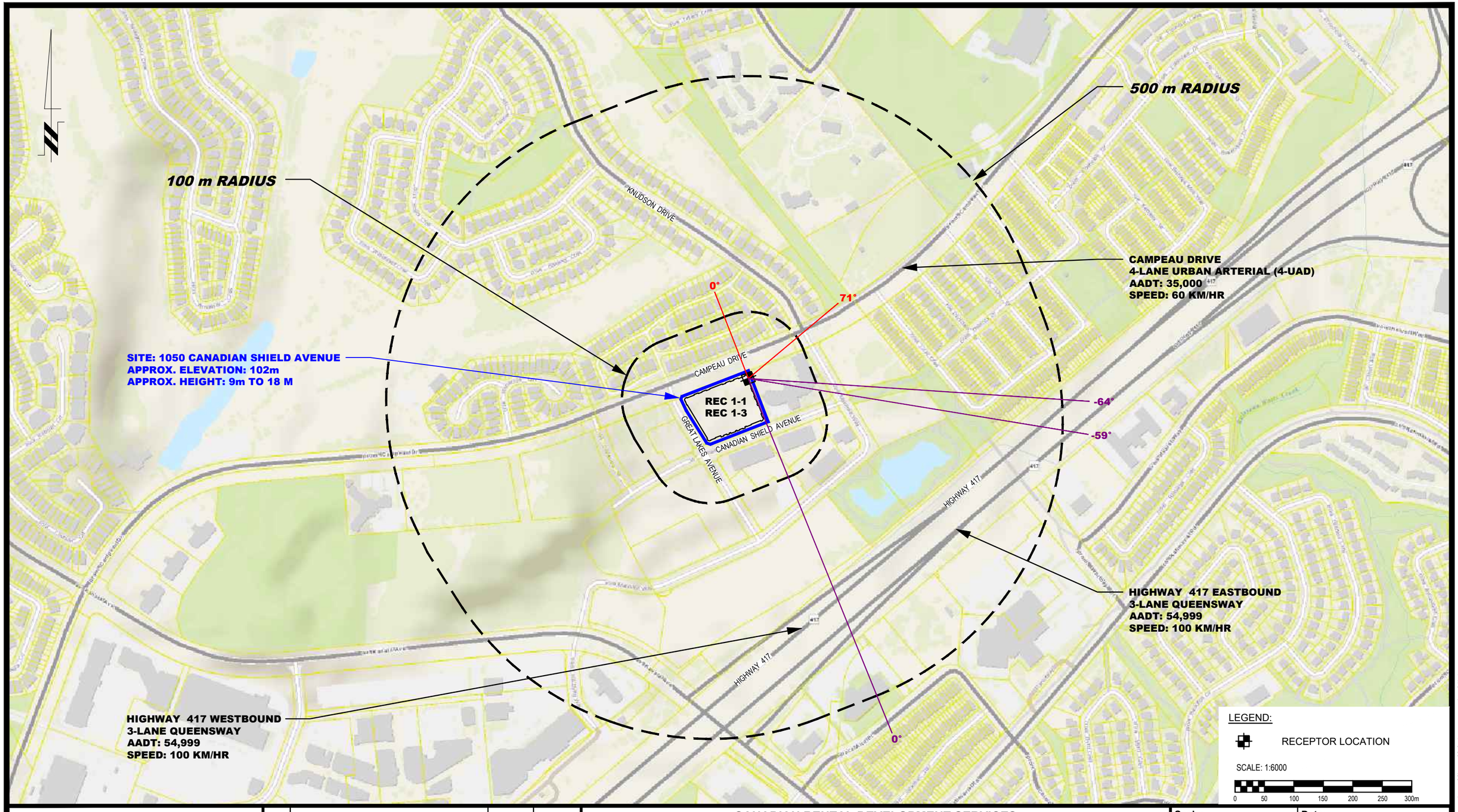

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PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 1-1 AND REC 1-3

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3A
Approved by: DJG	Revision No.: 1

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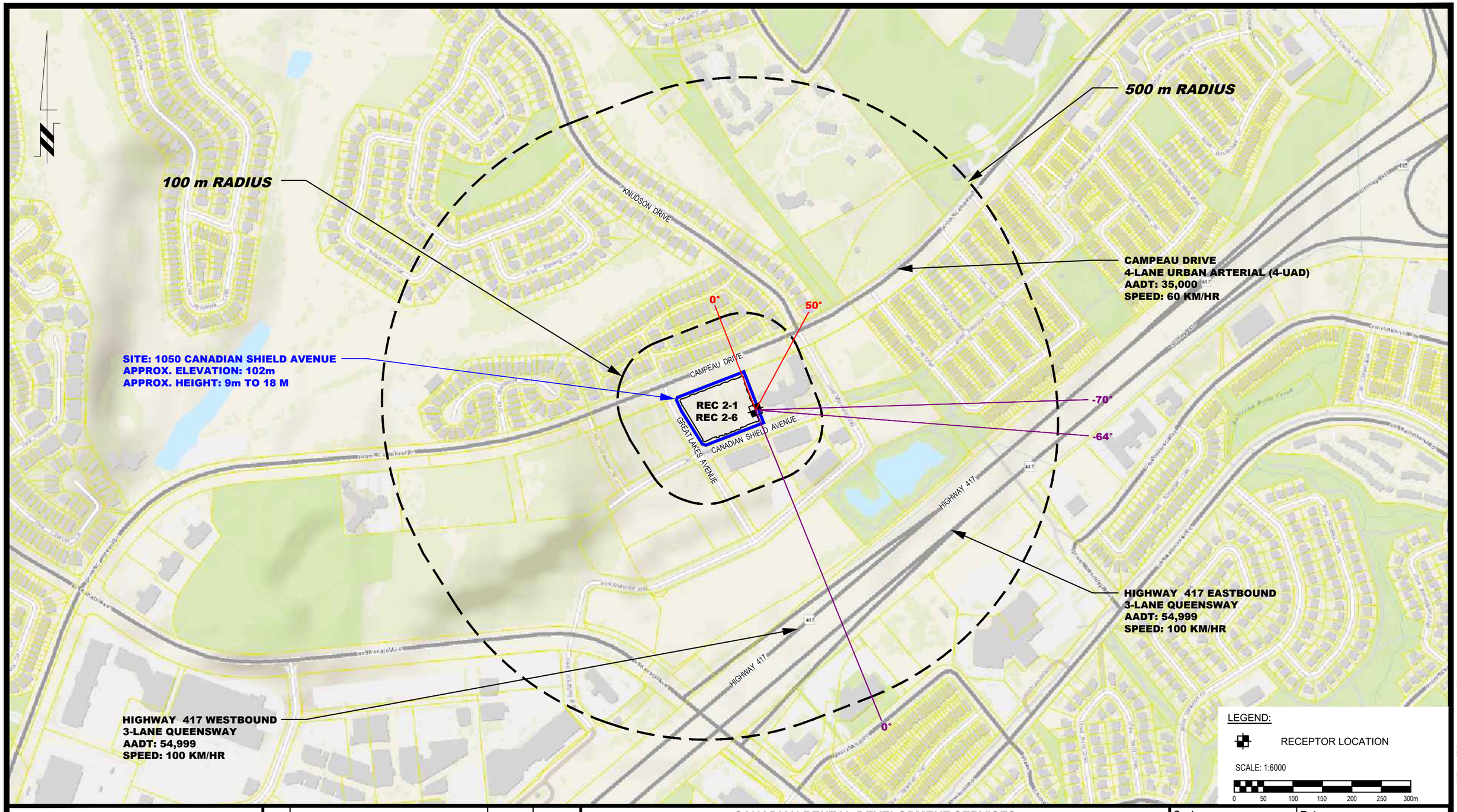

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1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 2-1 AND REC 2-6

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3B
Approved by: DJG	Revision No.: 1

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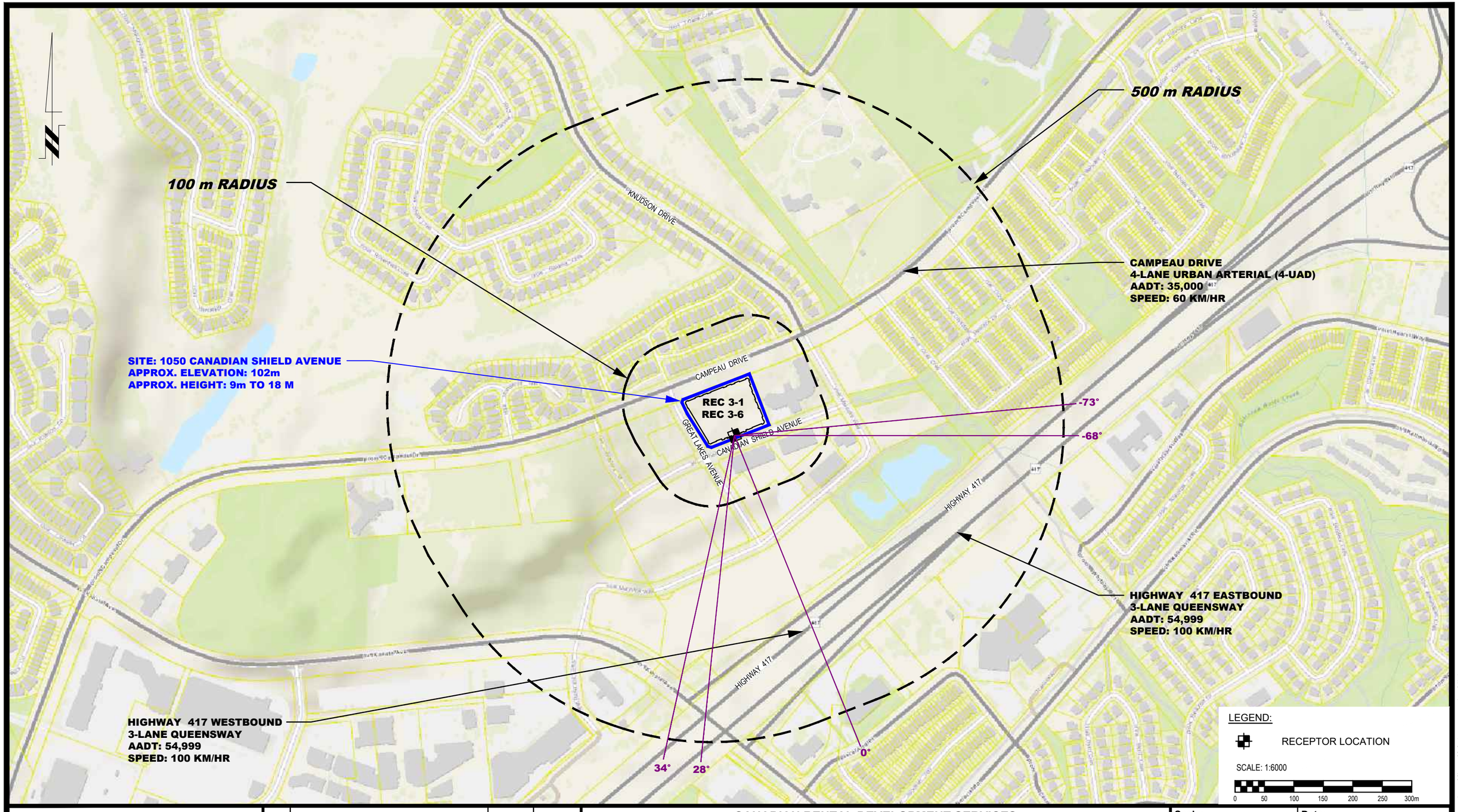

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PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 3-1 AND REC 3-6

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3C
Approved by: DJG	Revision No.: 1

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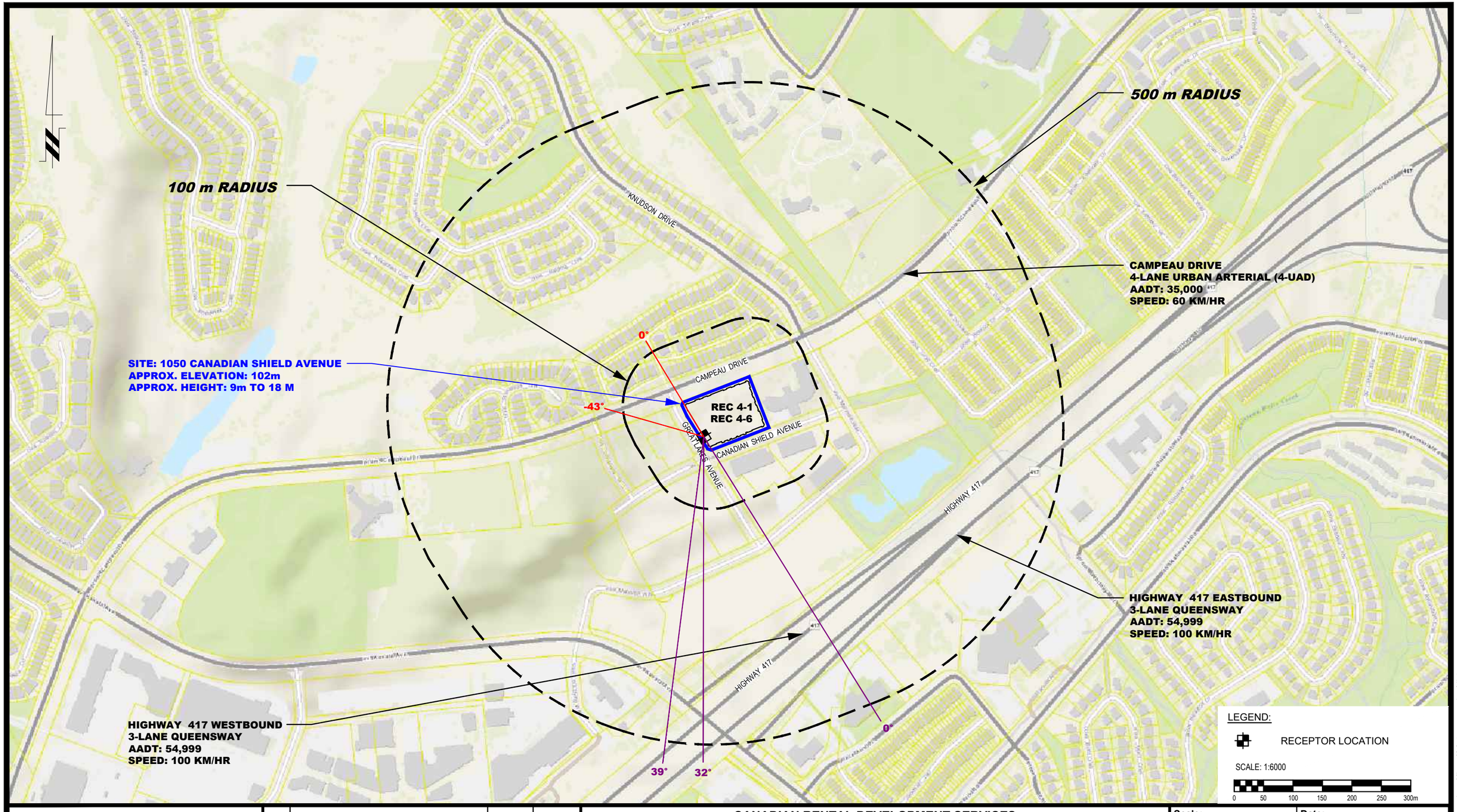

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1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 4-1 AND REC 4-6

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3D
Approved by: DJG	Revision No.: 1

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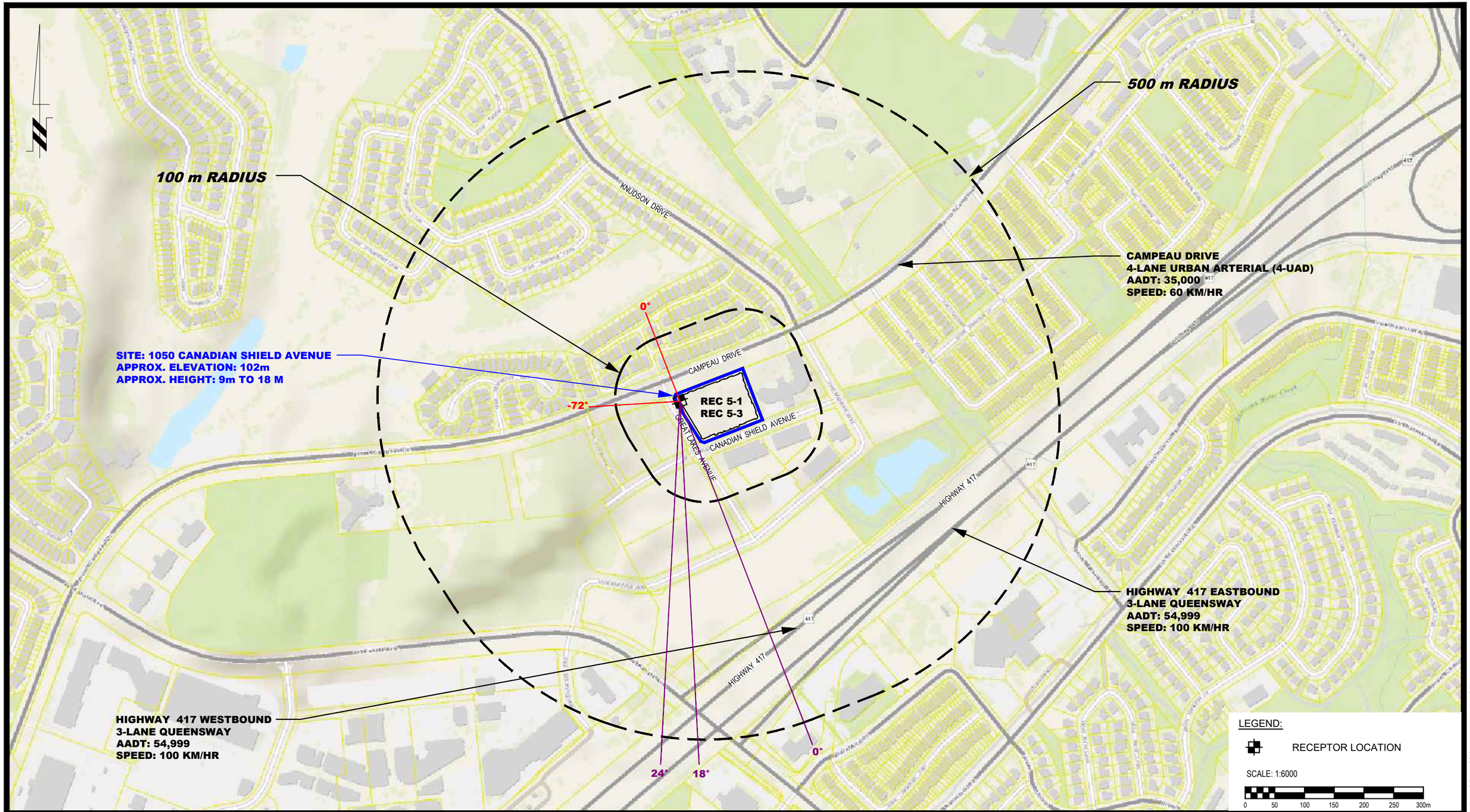

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1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 5-1 AND REC 5-3

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3E
Approved by: DJG	Revision No.: 1

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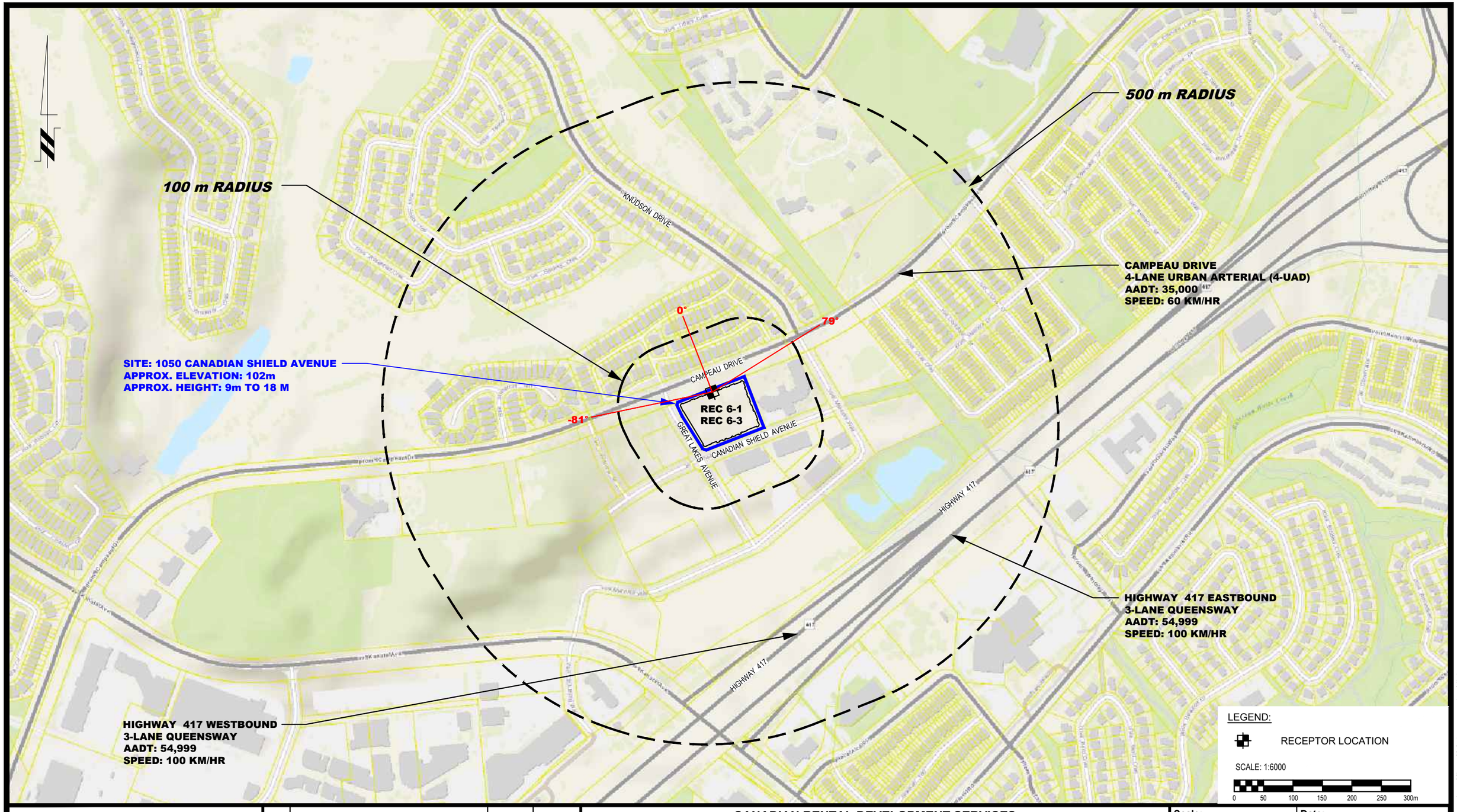

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1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 6-1 AND REC 6-3

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3F
Approved by: DJG	Revision No.:

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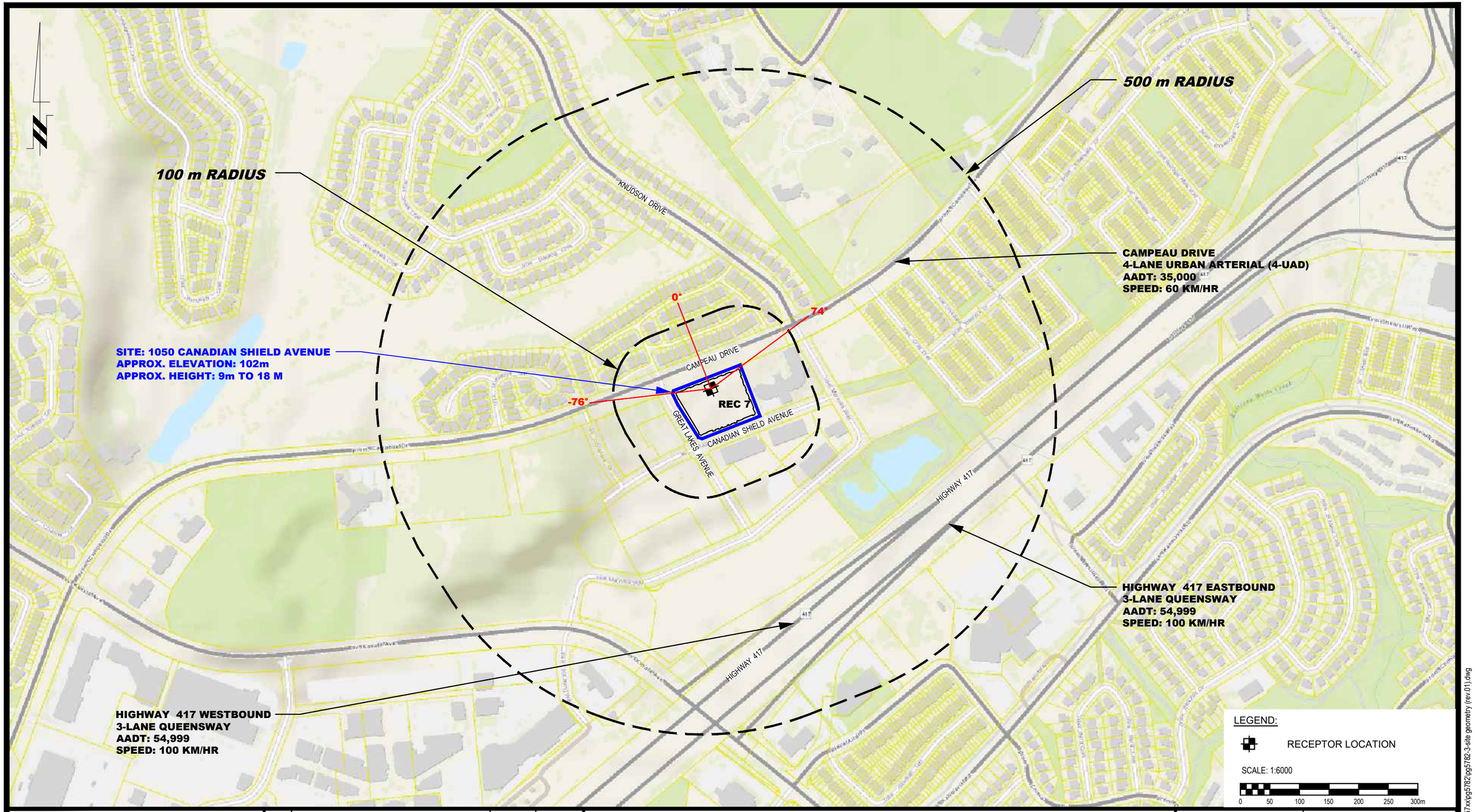

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NOISE ATTENUATION STUDY
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 7

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3G
Approved by: DJG	Revision No.: 1

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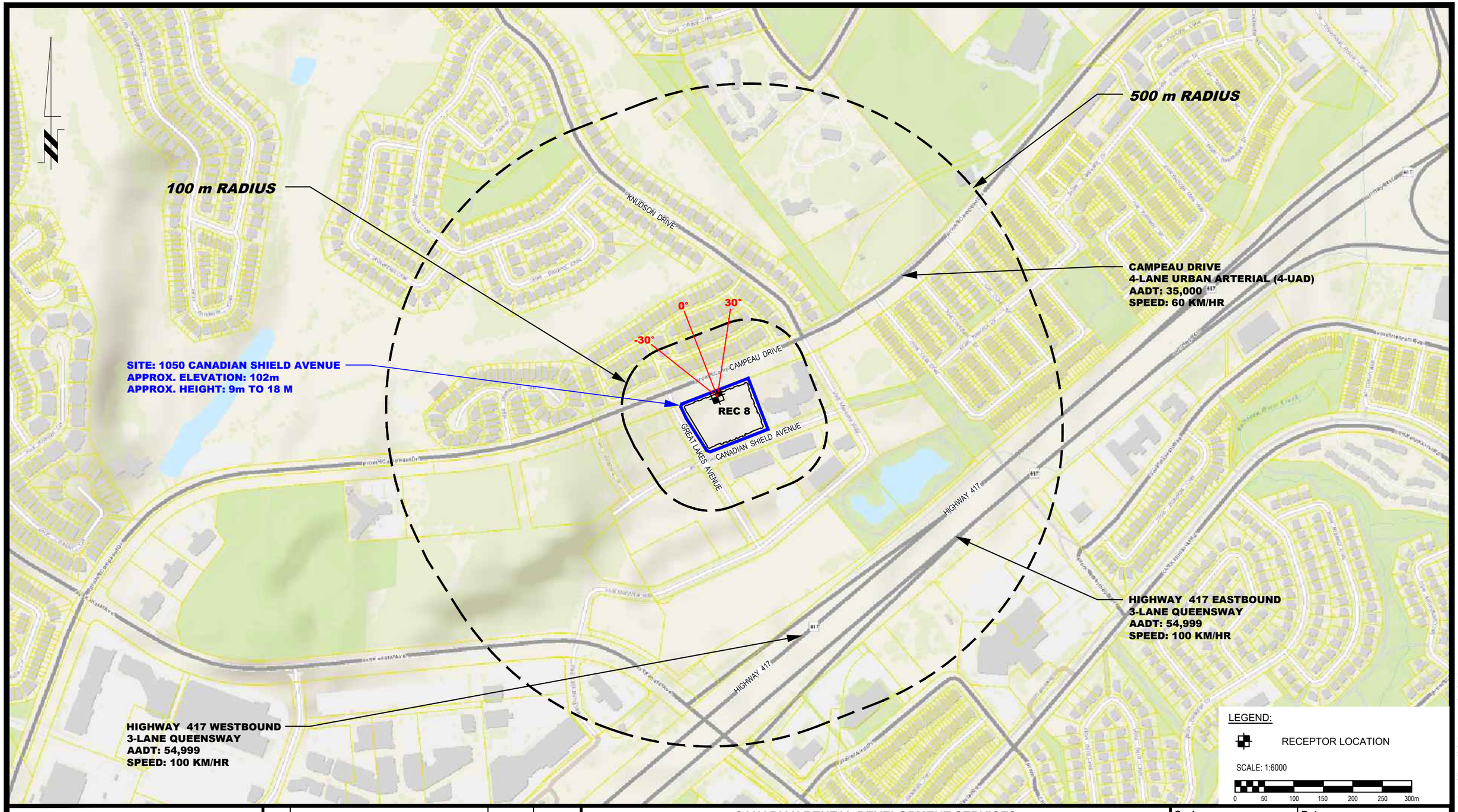

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PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 8

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3H
Approved by: DJG	Revision No.: 1

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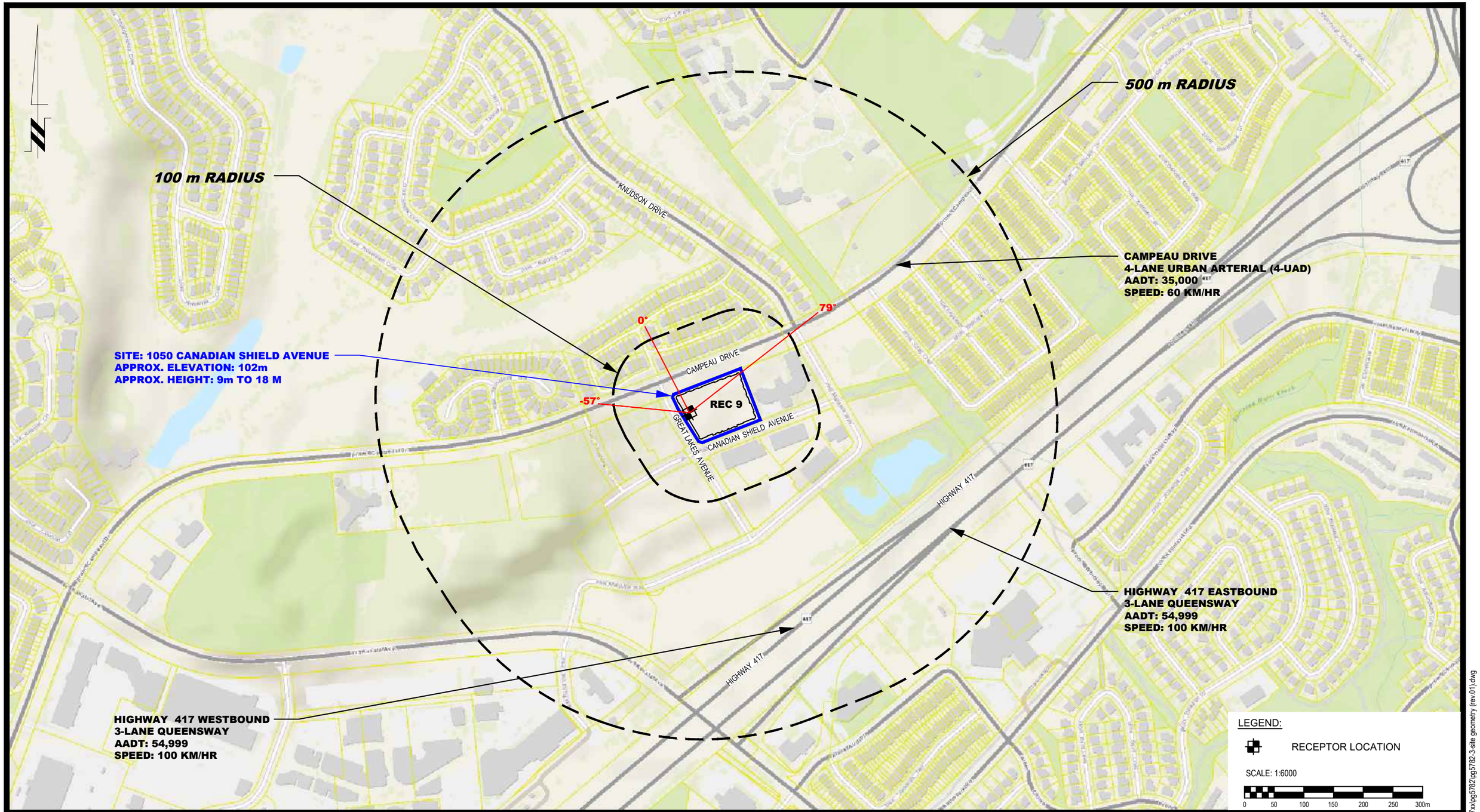

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NOISE ATTENUATION STUDY
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 9

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3I
Approved by: DJG	Revision No.: 1

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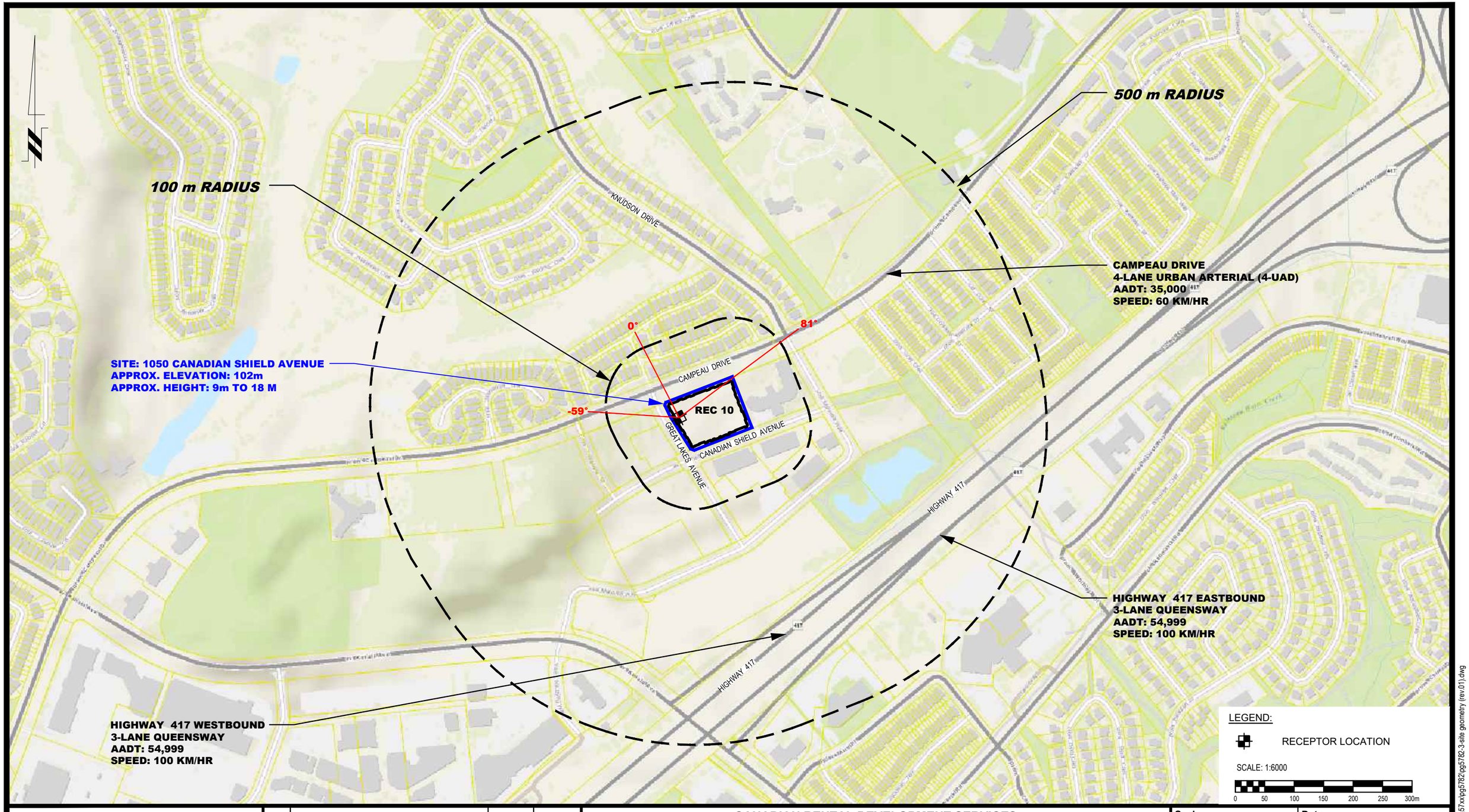

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NOISE ATTENUATION STUDY
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 10

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3J
Approved by: DJG	Revision No.: 1

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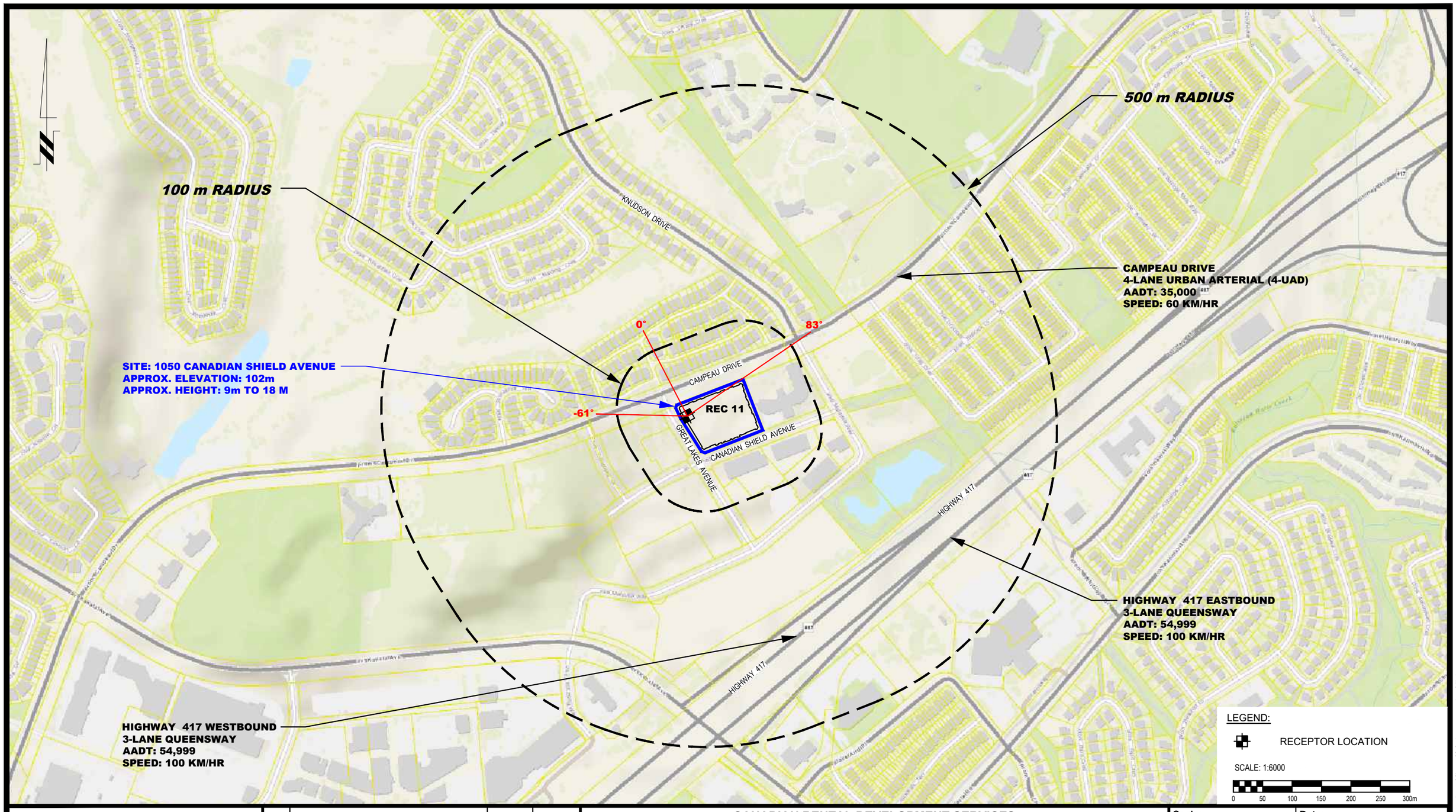

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NOISE ATTENUATION STUDY
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 11

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3K
Approved by: DJG	Revision No.: 1

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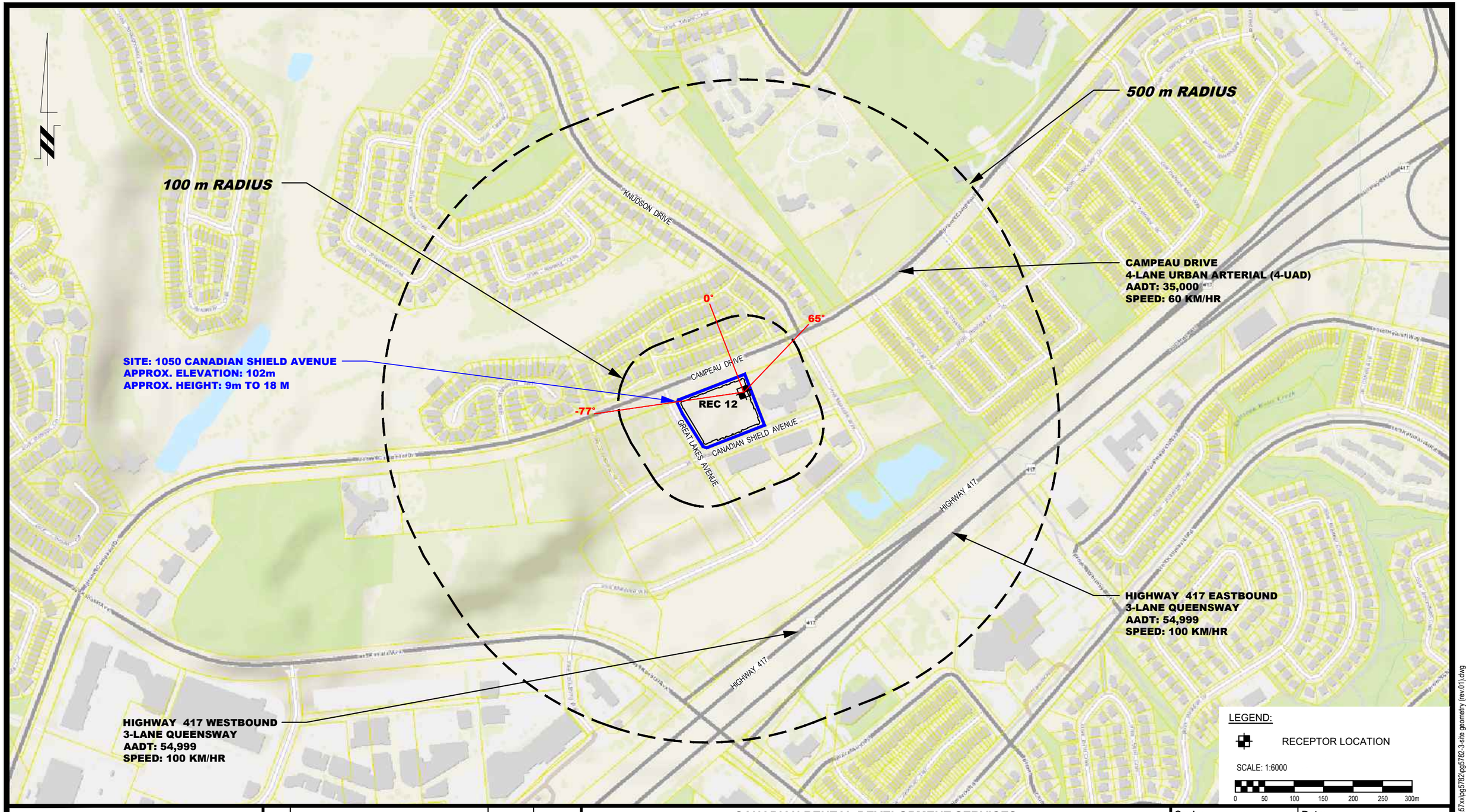

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NOISE ATTENUATION STUDY
PROPOSED MULTI-STOREY RESIDENTIAL BUILDING
1050 CANADIAN SHIELD AVENUE
OTTAWA, ONTARIO

Title:

SITE GEOMETRY - REC 12

Scale: 1:6000	Date: 04/2021
Drawn by: YA	Report No.: PG5782-1
Checked by: SB	Dwg. No.: PG5782-3L
Approved by: DJG	Revision No.: 1

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APPENDIX 2

STAMSON RESULTS

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 25:35:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec11.te Time Period: Day/Night 16/8 hours
Description: Reception Point 1-1

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : 0.00 deg 71.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           : -59.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      3 / 3
House density             :     60 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 410.00 / 410.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           : -64.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      3 / 3
House density             :     60 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 380.00 / 380.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 62.71 + 0.00) = 62.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	71	0.66	73.68	0.00	-6.11	-4.85	0.00	0.00	0.00	62.71

Segment Leq : 62.71 dBA

↟
Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 44.85 + 0.00) = 44.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-59	0	0.66	80.15	0.00	-23.85	-5.39	0.00	-6.06	0.00	44.85

Segment Leq : 44.85 dBA

↟
Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 45.63 + 0.00) = 45.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-64	0	0.66	80.15	0.00	-23.30	-5.14	0.00	-6.08	0.00	45.63

Segment Leq : 45.63 dBA

Total Leq All Segments: 62.86 dBA

↟
Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 55.12 + 0.00) = 55.12 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------------
     0     71   0.66  66.08   0.00  -6.11  -4.85   0.00   0.00   0.00  55.12
-------------------------------------------------------------------------------

Segment Leq : 55.12 dBA

↑
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 37.26 + 0.00) = 37.26 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -59      0   0.66  72.55   0.00 -23.85  -5.39   0.00  -6.06   0.00  37.26
-------------------------------------------------------------------------------

Segment Leq : 37.26 dBA

↑
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 38.03 + 0.00) = 38.03 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -64      0   0.66  72.55   0.00 -23.30  -5.14   0.00  -6.08   0.00  38.03
-------------------------------------------------------------------------------

Segment Leq : 38.03 dBA

Total Leq All Segments: 55.27 dBA

↑



TOTAL Leq FROM ALL SOURCES (DAY): 62.86
                           (NIGHT): 55.27
↑
↑
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:23:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec13.te Time Period: Day/Night 16/8 hours
Description: Reception Point 1-3

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : 0.00 deg 71.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height : 10.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           : -59.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      3 / 3
House density             :     60 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 410.00 / 410.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           : -64.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      3 / 3
House density             :     60 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 380.00 / 380.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 64.02 + 0.00) = 64.02 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	71	0.39	73.68	0.00	-5.12	-4.54	0.00	0.00	0.00	64.02

Segment Leq : 64.02 dBA

↟
Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 48.94 + 0.00) = 48.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-59	0	0.39	80.15	0.00	-19.97	-5.17	0.00	-6.06	0.00	48.94

Segment Leq : 48.94 dBA

↟
Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 49.67 + 0.00) = 49.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-64	0	0.39	80.15	0.00	-19.51	-4.88	0.00	-6.08	0.00	49.67

Segment Leq : 49.67 dBA

Total Leq All Segments: 64.30 dBA

↟
Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 56.42 + 0.00) = 56.42 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------------
     0     71   0.39  66.08   0.00  -5.12  -4.54   0.00   0.00   0.00  56.42
-------------------------------------------------------------------------------

Segment Leq : 56.42 dBA

♠
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 41.35 + 0.00) = 41.35 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -59      0   0.39  72.55   0.00 -19.97  -5.17   0.00  -6.06   0.00  41.35
-------------------------------------------------------------------------------

Segment Leq : 41.35 dBA

♠
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 42.07 + 0.00) = 42.07 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -64      0   0.39  72.55   0.00 -19.51  -4.88   0.00  -6.08   0.00  42.07
-------------------------------------------------------------------------------

Segment Leq : 42.07 dBA

Total Leq All Segments: 56.71 dBA

♠



TOTAL Leq FROM ALL SOURCES (DAY): 64.30
                           (NIGHT): 56.71
♠
♠
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:28:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec21.te Time Period: Day/Night 16/8 hours
Description: Reception Point 2-1

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : 0.00 deg 50.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 90.00 / 90.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           : -64.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 2
House density             :     40 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 380.00 / 380.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           : -70.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 2
House density             :     40 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 345.00 / 345.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 54.81 + 0.00) = 54.81 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	50	0.66	73.68	0.00	-12.92	-5.94	0.00	0.00	0.00	54.81

Segment Leq : 54.81 dBA

↟

Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 48.37 + 0.00) = 48.37 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-64	0	0.66	80.15	0.00	-23.30	-5.14	0.00	-3.34	0.00	48.37

Segment Leq : 48.37 dBA

↟

Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 49.30 + 0.00) = 49.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	0	0.66	80.15	0.00	-22.60	-4.89	0.00	-3.36	0.00	49.30

Segment Leq : 49.30 dBA

Total Leq All Segments: 56.59 dBA

↟

Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 47.22 + 0.00) = 47.22 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------------
     0     50   0.66  66.08   0.00 -12.92  -5.94   0.00   0.00   0.00  47.22
-------------------------------------------------------------------------------

Segment Leq : 47.22 dBA

↟
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 40.77 + 0.00) = 40.77 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -64      0   0.66  72.55   0.00 -23.30  -5.14   0.00  -3.34   0.00  40.77
-------------------------------------------------------------------------------

Segment Leq : 40.77 dBA

↟
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 41.70 + 0.00) = 41.70 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -70      0   0.66  72.55   0.00 -22.60  -4.89   0.00  -3.36   0.00  41.70
-------------------------------------------------------------------------------

Segment Leq : 41.70 dBA

Total Leq All Segments: 49.00 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 56.59
                           (NIGHT): 49.00
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:28:49
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec26.te Time Period: Day/Night 16/8 hours
Description: Reception Point 2-6

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : 0.00 deg 50.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 90.00 / 90.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           : -64.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 2
House density             :     40 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 380.00 / 380.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-------------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           : -70.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 2
House density             :     40 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 345.00 / 345.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 58.57 + 0.00) = 58.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	50	0.21	73.68	0.00	-9.42	-5.69	0.00	0.00	0.00	58.57

Segment Leq : 58.57 dBA

↟

Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 55.11 + 0.00) = 55.11 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-64	0	0.21	80.15	0.00	-16.99	-4.71	0.00	-3.34	0.00	55.11

Segment Leq : 55.11 dBA

↟

Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 55.94 + 0.00) = 55.94 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	0	0.21	80.15	0.00	-16.48	-4.37	0.00	-3.36	0.00	55.94

Segment Leq : 55.94 dBA

Total Leq All Segments: 61.57 dBA

↟

Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 50.97 + 0.00) = 50.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------------
     0     50   0.21  66.08   0.00  -9.42  -5.69   0.00   0.00   0.00  50.97
-------------------------------------------------------------------------------

Segment Leq : 50.97 dBA

↟
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 47.52 + 0.00) = 47.52 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -64      0   0.21  72.55   0.00 -16.99  -4.71   0.00  -3.34   0.00  47.52
-------------------------------------------------------------------------------

Segment Leq : 47.52 dBA

↟
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 48.35 + 0.00) = 48.35 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -70      0   0.21  72.55   0.00 -16.48  -4.37   0.00  -3.36   0.00  48.35
-------------------------------------------------------------------------------

Segment Leq : 48.35 dBA

Total Leq All Segments: 53.98 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 61.57
                           (NIGHT): 53.98
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:29:40
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec31.te Time Period: Day/Night 16/8 hours
Description: Reception Point 3-1

Road data, segment # 1: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hwy 417 East (day/night)

Angle1 Angle2 : -68.00 deg 28.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 40 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hwy 417 West (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999

```
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           : -73.00 deg   34.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 2
House density             :     40 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 330.00 / 330.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

↟
Results segment # 1: Hwy 417 East (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 50.23 + 0.00) = 50.23 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -68     28   0.66  80.15   0.00 -23.30  -3.28   0.00  -3.34   0.00  50.23
-------------------------------------------------------------------------------

Segment Leq : 50.23 dBA

↟
Results segment # 2: Hwy 417 West (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 51.61 + 0.00) = 51.61 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -73     34   0.66  80.15   0.00 -22.28  -2.89   0.00  -3.36   0.00  51.61
-------------------------------------------------------------------------------

Segment Leq : 51.61 dBA

Total Leq All Segments: 53.98 dBA

↟
Results segment # 1: Hwy 417 East (night)
```

Source height = 1.50 m

ROAD (0.00 + 42.63 + 0.00) = 42.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-68	28	0.66	72.55	0.00	-23.30	-3.28	0.00	-3.34	0.00	42.63

Segment Leq : 42.63 dBA

↟

Results segment # 2: Hwy 417 West (night)

Source height = 1.50 m

ROAD (0.00 + 44.01 + 0.00) = 44.01 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-73	34	0.66	72.55	0.00	-22.28	-2.89	0.00	-3.36	0.00	44.01

Segment Leq : 44.01 dBA

Total Leq All Segments: 46.38 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 53.98
(NIGHT): 46.38

↟

↟

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:30:01
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec36.te Time Period: Day/Night 16/8 hours
Description: Reception Point 3-6

Road data, segment # 1: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Hwy 417 East (day/night)

Angle1 Angle2 : -68.00 deg 28.00 deg
Wood depth : 0 (No woods.)
No of house rows : 2 / 2
House density : 40 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 380.00 / 380.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: Hwy 417 West (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999

```
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           : -73.00 deg   34.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      2 / 2
House density             :     40 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 330.00 / 330.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

🠕
Results segment # 1: Hwy 417 East (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 56.90 + 0.00) = 56.90 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -68     28   0.21  80.15   0.00 -16.99  -2.92   0.00  -3.34   0.00  56.90
-------------------------------------------------------------------------------

Segment Leq : 56.90 dBA

🠕
Results segment # 2: Hwy 417 West (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 58.06 + 0.00) = 58.06 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -73     34   0.21  80.15   0.00 -16.25  -2.48   0.00  -3.36   0.00  58.06
-------------------------------------------------------------------------------

Segment Leq : 58.06 dBA

Total Leq All Segments: 60.53 dBA

🠕
Results segment # 1: Hwy 417 East (night)
```

Source height = 1.50 m

ROAD (0.00 + 49.31 + 0.00) = 49.31 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-68	28	0.21	72.55	0.00	-16.99	-2.92	0.00	-3.34	0.00	49.31

Segment Leq : 49.31 dBA

↟

Results segment # 2: Hwy 417 West (night)

Source height = 1.50 m

ROAD (0.00 + 50.47 + 0.00) = 50.47 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-73	34	0.21	72.55	0.00	-16.25	-2.48	0.00	-3.36	0.00	50.47

Segment Leq : 50.47 dBA

Total Leq All Segments: 52.94 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 60.53
(NIGHT): 52.94

↟

↟

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:32:10
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec41.te Time Period: Day/Night 16/8 hours
Description: Reception Point 4-1

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -43.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 95.00 / 95.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   32.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 475.00 / 475.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-------------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   39.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 410.00 / 410.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 53.87 + 0.00) = 53.87 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-43	0	0.66	73.68	0.00	-13.31	-6.50	0.00	0.00	0.00	53.87

Segment Leq : 53.87 dBA

↟

Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 46.78 + 0.00) = 46.78 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	32	0.66	80.15	0.00	-24.91	-7.65	0.00	-0.80	0.00	46.78

Segment Leq : 46.78 dBA

↟

Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 48.63 + 0.00) = 48.63 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	39	0.66	80.15	0.00	-23.85	-6.87	0.00	-0.80	0.00	48.63

Segment Leq : 48.63 dBA

Total Leq All Segments: 55.62 dBA

↟

Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 46.28 + 0.00) = 46.28 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------------
   -43      0   0.66  66.08   0.00 -13.31  -6.50   0.00   0.00   0.00  46.28
-------------------------------------------------------------------------------

Segment Leq : 46.28 dBA

↟
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 39.19 + 0.00) = 39.19 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     32   0.66  72.55   0.00 -24.91  -7.65   0.00  -0.80   0.00  39.19
-------------------------------------------------------------------------------

Segment Leq : 39.19 dBA

↟
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 41.03 + 0.00) = 41.03 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     39   0.66  72.55   0.00 -23.85  -6.87   0.00  -0.80   0.00  41.03
-------------------------------------------------------------------------------

Segment Leq : 41.03 dBA

Total Leq All Segments: 48.02 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 55.62
                           (NIGHT): 48.02
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:32:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec46.te Time Period: Day/Night 16/8 hours
Description: Reception Point 4-6

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -43.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 95.00 / 95.00 m
Receiver height : 16.50 / 16.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   32.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 475.00 / 475.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-------------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   39.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 410.00 / 410.00 m
Receiver height           :  16.50 / 16.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 57.67 + 0.00) = 57.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-43	0	0.21	73.68	0.00	-9.70	-6.31	0.00	0.00	0.00	57.67

Segment Leq : 57.67 dBA

↟
Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 53.64 + 0.00) = 53.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	32	0.21	80.15	0.00	-18.16	-7.55	0.00	-0.80	0.00	53.64

Segment Leq : 53.64 dBA

↟
Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 55.25 + 0.00) = 55.25 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	39	0.21	80.15	0.00	-17.39	-6.72	0.00	-0.80	0.00	55.25

Segment Leq : 55.25 dBA

Total Leq All Segments: 60.61 dBA

↟
Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 50.07 + 0.00) = 50.07 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
-------------------------------------------------------------------------------
   -43      0   0.21  66.08   0.00  -9.70  -6.31   0.00   0.00   0.00  50.07
-------------------------------------------------------------------------------

Segment Leq : 50.07 dBA

🠉
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 46.04 + 0.00) = 46.04 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     32   0.21  72.55   0.00 -18.16  -7.55   0.00  -0.80   0.00  46.04
-------------------------------------------------------------------------------

Segment Leq : 46.04 dBA

🠉
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 47.65 + 0.00) = 47.65 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     39   0.21  72.55   0.00 -17.39  -6.72   0.00  -0.80   0.00  47.65
-------------------------------------------------------------------------------

Segment Leq : 47.65 dBA

Total Leq All Segments: 53.01 dBA

🠉



TOTAL Leq FROM ALL SOURCES (DAY): 60.61
                           (NIGHT): 53.01
🠉
🠉
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:35:16
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec51.te Time Period: Day/Night 16/8 hours
Description: Reception Point 5-1

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -72.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 40.00 / 40.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   18.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 495.00 / 495.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-------------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   24.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 480.00 / 480.00 m
Receiver height           :   1.50 / 1.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

```
------------------------------------

Source height = 1.50 m

ROAD (0.00 + 61.78 + 0.00) = 61.78 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -72      0   0.66  73.68   0.00  -7.07  -4.82   0.00   0.00   0.00  61.78
-------------------------------------------------------------------------------

Segment Leq : 61.78 dBA

🠉
Results segment # 2: Hwy 417 East (day)
------------------------------------

Source height = 1.50 m

ROAD (0.00 + 44.09 + 0.00) = 44.09 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     18   0.66  80.15   0.00 -25.21 -10.05   0.00  -0.80   0.00  44.09
-------------------------------------------------------------------------------

Segment Leq : 44.09 dBA

🠉
Results segment # 3: Hwy 417 West (day)
------------------------------------

Source height = 1.50 m

ROAD (0.00 + 45.53 + 0.00) = 45.53 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     24   0.66  80.15   0.00 -24.99  -8.84   0.00  -0.80   0.00  45.53
-------------------------------------------------------------------------------

Segment Leq : 45.53 dBA

Total Leq All Segments: 61.95 dBA

🠉
Results segment # 1: Campeau Dr (night)
------------------------------------

Source height = 1.50 m

ROAD (0.00 + 54.19 + 0.00) = 54.19 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
```

```
-------------------------------------------------------------------------------
   -72      0   0.66  66.08   0.00  -7.07  -4.82   0.00   0.00   0.00  54.19
-------------------------------------------------------------------------------

Segment Leq : 54.19 dBA

↟
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 36.50 + 0.00) = 36.50 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     18   0.66  72.55   0.00 -25.21 -10.05   0.00  -0.80   0.00  36.50
-------------------------------------------------------------------------------

Segment Leq : 36.50 dBA

↟
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 37.93 + 0.00) = 37.93 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     24   0.66  72.55   0.00 -24.99  -8.84   0.00  -0.80   0.00  37.93
-------------------------------------------------------------------------------

Segment Leq : 37.93 dBA

Total Leq All Segments: 54.36 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 61.95
                           (NIGHT): 54.36
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:36:05
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec53.te Time Period: Day/Night 16/8 hours
Description: Reception Point 5-3

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -72.00 deg 0.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 40.00 / 40.00 m
Receiver height : 10.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

↑
Road data, segment # 2: Hwy 417 East (day/night)

Car traffic volume : 44527/3872 veh/TimePeriod *
Medium truck volume : 3542/308 veh/TimePeriod *
Heavy truck volume : 2530/220 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 54999
Percentage of Annual Growth : 0.00

```
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Hwy 417 East (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   18.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 495.00 / 495.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Road data, segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Car traffic volume  : 44527/3872  veh/TimePeriod  *
Medium truck volume :  3542/308   veh/TimePeriod  *
Heavy truck volume  :  2530/220   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  54999
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Hwy 417 West (day/night)
-----------------------------------------------
Angle1   Angle2           :   0.00 deg   24.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      1 / 1
House density             :     20 %
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 480.00 / 480.00 m
Receiver height           :  10.50 / 10.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

↟

```
Results segment # 1: Campeau Dr (day)
```

Source height = 1.50 m

ROAD (0.00 + 63.26 + 0.00) = 63.26 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-72	0	0.39	73.68	0.00	-5.92	-4.50	0.00	0.00	0.00	63.26

Segment Leq : 63.26 dBA

↟

Results segment # 2: Hwy 417 East (day)

Source height = 1.50 m

ROAD (0.00 + 48.21 + 0.00) = 48.21 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	18	0.39	80.15	0.00	-21.11	-10.03	0.00	-0.80	0.00	48.21

Segment Leq : 48.21 dBA

↟

Results segment # 3: Hwy 417 West (day)

Source height = 1.50 m

ROAD (0.00 + 49.62 + 0.00) = 49.62 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	24	0.39	80.15	0.00	-20.92	-8.80	0.00	-0.80	0.00	49.62

Segment Leq : 49.62 dBA

Total Leq All Segments: 63.57 dBA

↟

Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 55.66 + 0.00) = 55.66 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq

```
--------------------------------------------------------------------------------
   -72      0   0.39  66.08   0.00  -5.92  -4.50   0.00   0.00   0.00  55.66
--------------------------------------------------------------------------------

Segment Leq : 55.66 dBA

↟
Results segment # 2: Hwy 417 East (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 40.61 + 0.00) = 40.61 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
     0     18   0.39  72.55   0.00 -21.11 -10.03   0.00  -0.80   0.00  40.61
--------------------------------------------------------------------------------

Segment Leq : 40.61 dBA

↟
Results segment # 3: Hwy 417 West (night)
----------------------------------------

Source height = 1.50 m

ROAD (0.00 + 42.03 + 0.00) = 42.03 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
--------------------------------------------------------------------------------
     0     24   0.39  72.55   0.00 -20.92  -8.80   0.00  -0.80   0.00  42.03
--------------------------------------------------------------------------------

Segment Leq : 42.03 dBA

Total Leq All Segments: 55.97 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 63.57
                           (NIGHT): 55.97
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:39:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec61.te Time Period: Day/Night 16/8 hours
Description: Reception Point 6-1

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -81.00 deg 79.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 30.00 / 30.00 m
Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

ROAD (0.00 + 67.09 + 0.00) = 67.09 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	79	0.66	73.68	0.00	-5.00	-1.59	0.00	0.00	0.00	67.09

Segment Leq : 67.09 dBA

Total Leq All Segments: 67.09 dBA

↟
Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 59.49 + 0.00) = 59.49 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	79	0.66	66.08	0.00	-5.00	-1.59	0.00	0.00	0.00	59.49

Segment Leq : 59.49 dBA

Total Leq All Segments: 59.49 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 67.09
(NIGHT): 59.49
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:39:21
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec63.te Time Period: Day/Night 16/8 hours
Description: Reception Point 6-3

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -81.00 deg 79.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 30.00 / 30.00 m
Receiver height : 10.50 / 10.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

ROAD (0.00 + 68.30 + 0.00) = 68.30 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	79	0.39	73.68	0.00	-4.18	-1.19	0.00	0.00	0.00	68.30

Segment Leq : 68.30 dBA

Total Leq All Segments: 68.30 dBA

↟
Results segment # 1: Campeau Dr (night)

Source height = 1.50 m

ROAD (0.00 + 60.71 + 0.00) = 60.71 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-81	79	0.39	66.08	0.00	-4.18	-1.19	0.00	0.00	0.00	60.71

Segment Leq : 60.71 dBA

Total Leq All Segments: 60.71 dBA

↟

TOTAL Leq FROM ALL SOURCES (DAY): 68.30
(NIGHT): 60.71
↟
↟

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 25:28:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec7.te Time Period: Day/Night 16/8 hours
Description: Reception Point 7 - 4th Floor Rooftop Terrace

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -76.00 deg 74.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 44.00 / 44.00 m
Receiver height : 10.50 / 10.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -76.00 deg Angle2 : 74.00 deg
Barrier height : 9.00 m
Barrier receiver distance : 15.00 / 15.00 m
Source elevation : 102.00 m
Receiver elevation : 102.00 m
Barrier elevation : 102.00 m
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       10.50 !        7.43 !       109.43

ROAD (0.00 + 59.93 + 0.00) = 59.93 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -76     74   0.00  73.68   0.00  -4.67  -0.79   0.00   0.00  -8.28  59.93
-------------------------------------------------------------------------------

Segment Leq : 59.93 dBA

Total Leq All Segments: 59.93 dBA

↟
Results segment # 1: Campeau Dr (night)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       10.50 !        7.43 !       109.43

ROAD (0.00 + 52.33 + 0.00) = 52.33 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -76     74   0.00  66.08   0.00  -4.67  -0.79   0.00   0.00  -8.28  52.33
-------------------------------------------------------------------------------

Segment Leq : 52.33 dBA

Total Leq All Segments: 52.33 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 59.93
                          (NIGHT): 52.33
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 24:44:36
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec8.te Time Period: Day/Night 16/8 hours
Description: Reception Point 8 - 3rd Floor Rooftop Terrace

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -30.00 deg 30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height : 7.50 / 7.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -30.00 deg Angle2 : 30.00 deg
Barrier height : 7.00 m
Barrier receiver distance : 3.00 / 3.00 m
Source elevation : 102.00 m
Receiver elevation : 102.00 m
Barrier elevation : 102.00 m
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        6.99 !       108.99

ROAD (0.00 + 59.99 + 0.00) = 59.99 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -30     30   0.06  73.68   0.00  -3.90  -4.78   0.00   0.00  -5.00  59.99
-------------------------------------------------------------------------------

Segment Leq : 59.99 dBA

Total Leq All Segments: 59.99 dBA

↟
Results segment # 1: Campeau Dr (night)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        7.50 !        6.99 !       108.99

ROAD (0.00 + 52.39 + 0.00) = 52.39 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -30     30   0.06  66.08   0.00  -3.90  -4.78   0.00   0.00  -5.00  52.39
-------------------------------------------------------------------------------

Segment Leq : 52.39 dBA

Total Leq All Segments: 52.39 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 59.99
                           (NIGHT): 52.39
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 23:37:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec9.te Time Period: Day/Night 16/8 hours
Description: Reception Point 9 - 6th Floor Rooftop Terrace

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -57.00 deg 79.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 65.00 / 65.00 m
Receiver height : 16.50 / 16.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -57.00 deg Angle2 : 79.00 deg
Barrier height : 16.00 m
Barrier receiver distance : 5.00 / 5.00 m
Source elevation : 102.00 m
Receiver elevation : 102.00 m
Barrier elevation : 102.00 m
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       16.50 !       15.35 !       117.35

ROAD (0.00 + 59.56 + 0.00) = 59.56 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -57     79   0.00  73.68   0.00  -6.37  -1.22   0.00   0.00  -6.53  59.56
-------------------------------------------------------------------------------

Segment Leq : 59.56 dBA

Total Leq All Segments: 59.56 dBA

↟
Results segment # 1: Campeau Dr (night)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       16.50 !       15.35 !       117.35

ROAD (0.00 + 51.96 + 0.00) = 51.96 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -57     79   0.00  66.08   0.00  -6.37  -1.22   0.00   0.00  -6.53  51.96
-------------------------------------------------------------------------------

Segment Leq : 51.96 dBA

Total Leq All Segments: 51.96 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 59.56
                          (NIGHT): 51.96
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 25:17:09
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec10.te Time Period: Day/Night 16/8 hours
Description: Reception Point 10 - 5th Floor Rooftop Terrace

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -59.00 deg 81.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 60.00 / 60.00 m
Receiver height : 13.50 / 13.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -59.00 deg Angle2 : 81.00 deg
Barrier height : 13.00 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 102.00 m
Receiver elevation : 102.00 m
Barrier elevation : 102.00 m
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       13.50 !       12.10 !       114.10

ROAD (0.00 + 59.52 + 0.00) = 59.52 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -59     81   0.00  73.68   0.00  -6.02  -1.09   0.00   0.00  -7.04  59.52
-------------------------------------------------------------------------------

Segment Leq : 59.52 dBA

Total Leq All Segments: 59.52 dBA

↟
Results segment # 1: Campeau Dr (night)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       13.50 !       12.10 !       114.10

ROAD (0.00 + 51.92 + 0.00) = 51.92 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -59     81   0.00  66.08   0.00  -6.02  -1.09   0.00   0.00  -7.04  51.92
-------------------------------------------------------------------------------

Segment Leq : 51.92 dBA

Total Leq All Segments: 51.92 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 59.52
                          (NIGHT): 51.92
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 25:30:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec11.te Time Period: Day/Night 16/8 hours
Description: Reception Point 11 - 4th Floor Rooftop Terrace

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -61.00 deg 83.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 50.00 / 50.00 m
Receiver height : 10.50 / 10.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -61.00 deg Angle2 : 83.00 deg
Barrier height : 10.00 m
Barrier receiver distance : 10.00 / 10.00 m
Source elevation : 102.00 m
Receiver elevation : 102.00 m
Barrier elevation : 102.00 m
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       10.50 !        8.70 !       110.70

ROAD (0.00 + 59.54 + 0.00) = 59.54 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -61     83   0.00  73.68   0.00  -5.23  -0.97   0.00   0.00  -7.94  59.54
-------------------------------------------------------------------------------

Segment Leq : 59.54 dBA

Total Leq All Segments: 59.54 dBA

↟
Results segment # 1: Campeau Dr (night)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       10.50 !        8.70 !       110.70

ROAD (0.00 + 51.94 + 0.00) = 51.94 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -61     83   0.00  66.08   0.00  -5.23  -0.97   0.00   0.00  -7.94  51.94
-------------------------------------------------------------------------------

Segment Leq : 51.94 dBA

Total Leq All Segments: 51.94 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 59.54
                           (NIGHT): 51.94
↟
↟
```

STAMSON 5.0 NORMAL REPORT Date: 30-01-2022 25:24:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: rec12.te Time Period: Day/Night 16/8 hours
Description: Reception Point 12 - 5th Floor Rooftop Terrace

Road data, segment # 1: Campeau Dr (day/night)

Car traffic volume : 28336/2464 veh/TimePeriod *
Medium truck volume : 2254/196 veh/TimePeriod *
Heavy truck volume : 1610/140 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 35000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Campeau Dr (day/night)

Angle1 Angle2 : -77.00 deg 65.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 60.00 / 60.00 m
Receiver height : 13.50 / 13.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -77.00 deg Angle2 : 65.00 deg
Barrier height : 13.00 m
Barrier receiver distance : 7.00 / 7.00 m
Source elevation : 102.00 m
Receiver elevation : 102.00 m
Barrier elevation : 102.00 m
Reference angle : 0.00

Results segment # 1: Campeau Dr (day)

Source height = 1.50 m

Barrier height for grazing incidence

```
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       13.50 !       12.10 !       114.10

ROAD (0.00 + 59.56 + 0.00) = 59.56 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -77     65   0.00  73.68   0.00  -6.02  -1.03   0.00   0.00  -7.06  59.56
-------------------------------------------------------------------------------

Segment Leq : 59.56 dBA

Total Leq All Segments: 59.56 dBA

↟
Results segment # 1: Campeau Dr (night)
---------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !       13.50 !       12.10 !       114.10

ROAD (0.00 + 51.97 + 0.00) = 51.97 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -77     65   0.00  66.08   0.00  -6.02  -1.03   0.00   0.00  -7.06  51.97
-------------------------------------------------------------------------------

Segment Leq : 51.97 dBA

Total Leq All Segments: 51.97 dBA

↟



TOTAL Leq FROM ALL SOURCES (DAY): 59.56
                           (NIGHT): 51.97
↟
↟
```